A similar experiment with anhydrous succinic acid would produce succinate of baryta and a homologue of carbonic acid, the existence of which is also indicated by other considerations. It is premature to dwell upon this point; but in this direction also I have made some experiments.

II. "Notice of Researches on the Sulphocyanide and Cyanate of Naphtyl, conducted by VINCENT HALL, Esq." By A. W. HOFMANN, Ph.D., F.R.S. &c. Received August 10, 1858.

The transformation of phenylcarbamide and phenylsulphocarbamide under the influence of anhydrous phosphoric acid, respectively into cyanate and sulphocyanide of phenyl, an account of which I submitted to the Society several months ago, suggested the probability that the hitherto unknown cyanates and sulphocyanides of radicals similar to phenyl might be obtained by analogous processes.

To establish this point experimentally, Mr. Vincent Hall has examined, in my laboratory, the deportment of some of the derivatives of *naphtylamine* under the influence of agents capable of fixing ammonia and its analogues.

Mr. Hall has found that the crude naphtaline, such as it is obtained from the gas-works, submitted at once, without sublimation, to the action, first of fuming nitric acid, and subsequently of acetic acid and metallic iron, furnishes the naphtylamine sufficiently pure for these experiments. The crude product thus obtained was digested with bisulphide of carbon in order to convert it into *naphtylsulphocarbamide*.

By distilling naphtylsulphocarbamide with anhydrous phosphoric acid, Mr. Hall has obtained a beautiful crystalline compound of a faint but peculiar odour, readily fusible, easily soluble in alcohol and ether, insoluble in water.

The analysis of this compound has led to the formula

$$C_{22}H_7NS_2 = C_{20}H_7, C_2NS_2,$$

showing that it is in fact *sulphocyanide of naphtyl*, formed according to the equation:—

$$\left.\begin{matrix}(C_2\ S_2)''\\(C_{20}\ H_7)_2\\H_2\end{matrix}\right\} N_2 = C_{20}\left.\begin{matrix}H_7\\H_2\end{matrix}\right\} N + C_{20}H_7, C_2NS_2.$$

Boiled with an alcoholic solution of naphtylamine, this compound readily reproduces naphtylsulphocarbamide, which by its insolubility is easily distinguished and separated from the sulphocyanide.

Gently heated with phenylamine, the new sulphocyanide gives rise to the formation of a crystalline compound, of properties very similar to those of the naphtylsulphocarbamide. This new body is *phenyl-naphtyl-sulphocarbamide**, containing—

$$C_{34}H_{14}N_2S_2 = C_{12}H_5, \left.\begin{matrix}(C_2S_2)'' \\ C_{20}H_7 \\ H_2\end{matrix}\right\} N_2.$$

Naphtylcarbamide, as obtained by the action of potassa on the corresponding sulpho-compound, or by the distillation of oxalate of naphtylamine, is likewise powerfully attacked by anhydrous phosphoric acid. Among the products of distillation a compound is found, which, by its chemical properties, is readily identified as *cyanate of naphtyl*.

$$C_{22}H_7NO_{20} = C_2H_7, C_2NO_2,$$

although the small quantity in which this body is produced—by far the greater amount of the naphtylcarbamide being charred by the action of anhydrous phosphoric acid—has hitherto prevented Mr. Hall from fixing the nature of the compound by an analysis.

* By the action of sulphocyanide of phenyl upon naphtylamine, I have obtained a crystalline compound very similar in its general characters to the body which Mr. Hall procures by the action of sulphocyanide of naphtyl on phenylamine. This substance likewise contains

$$C_{34}H_{14}N_2S_2 = C_{12}H_5, \left.\begin{matrix}(C_2S_2)'' \\ C_{20}H_7 \\ H_2\end{matrix}\right\} N_2,$$

for

$$C_{12}H_5H_2N + C_{20}H_7C_2NS_2 = C_{20}H_7, H_2N + C_{12}H_5, C_2NS_2 = C_{34}H_{14}N_2S_2.$$

Are these two bodies identical, or only isomeric? [A.W.H.]